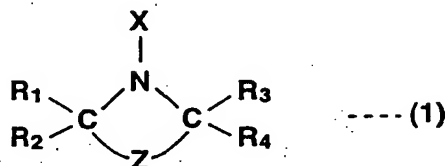


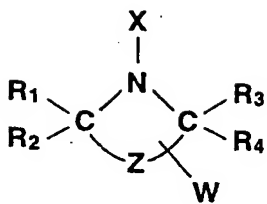
CLAIMS

1. An ink composition comprising a colorant, water, a compound expressed by the general formula (1) below, and a hydrazide group compound.



(In formula (1), X is hydrogen, an oxy radical group, hydroxyl group, alkyl group, alkenyl group, alkynyl group, aryl group, acyl group, sulfonyl group, sufinyl group, alkoxy group, aryloxy group, or acyloxy group; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are hydrogen or an alkyl group respectively; and Z is a non-metallic atom group necessary in order to complete a 5 to 7 member ring. Here, any two groups among R<sup>1</sup> to R<sup>4</sup> and Z may form a 5 to 7 member ring by mutual bonding.)

2. An ink composition described in Claim 1 wherein said compound expressed by the general formula (1) is a compound expressed by the general formula below having water soluble group W.



(In the formula, W expresses a hydroxyl group,  $-SO_3H$  group, sulfate ester group,  $-P(O)(OH)(OR)$ ,  $-P(O)(OR)_2$ , carboxyl group, amino group, carbamoyl group, or the salts thereof, phenolic hydroxyl group salts, polyethylene glycol ether group,  $-C=NH(NH_2)$  salts, or  $-NHC=NH(NH_2)$  salts (R is an alkyl group or an aryl group.) X is hydrogen, an oxy radical group, hydroxyl group, alkyl group, alkenyl group, alkylnyl group, aryl group, acyl group, sulfonyl group, sufinyl group, alkoxy group, aryloxy group, or acyloxy group;  $R^1$ ,  $R^2$ ,  $R^3$ , and  $R^4$  are hydrogen or an alkyl group respectively; and Z is a non-metallic atom group necessary in order to complete a 5 to 7 member ring. Here, any two groups among  $R^1$  to  $R^4$  and Z may form a 5 to 7 member ring by mutual bonding.)

3. An ink composition described in Claim 1 wherein the hydrazide group compound is a compound expressed by general formula  $R^5CXNHN R^6R^7$  ( $R^5$  is an alkyl group or an aryl group;  $R^6$  and  $R^7$  are hydrogen, an alkyl group, or an aryl group; and X is S or O), or general formula  $R^5SO_2NHN R^6R^7$  ( $R^5$  is an alkyl group or an

aryl group; and  $R^6$  and  $R^7$  are hydrogen, an alkyl group, or an aryl group).

4. An ink composition described in Claim 1 wherein the hydrazide group compound is a compound expressed by general formula  $R^5NHCXNHN R^6R^7$  ( $R^5$  is an alkyl group or an aryl group;  $R^6$  and  $R^7$  are hydrogen, an alkyl group, or an aryl group; and X is S or O).

5. An ink composition described in Claim 1 wherein said hydrazide group compound has two or more hydrazide structures in the same molecule.

6. An ink composition described in Claim 1 wherein Z in the compound expressed by the aforementioned general formula (1) is a non-metallic atom group necessary to complete a six member ring.

7. An ink composition described in Claim 1 wherein S in the compound expressed by the aforementioned general formula (1) is an oxy radical group.

8. An ink composition described in Claim 1 wherein the compound expressed by the aforementioned general formula (1) comprises no

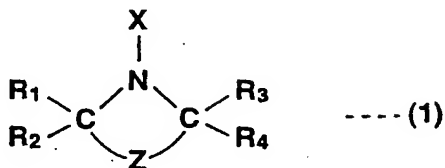
less than 0.05 wt% and not more than 10 wt% of the ink composition.

9. An ink composition described in Claim 1 wherein said hydrazide group compound comprises not less than 0.01 wt% and not more than 10 wt% of the ink composition.

10. An ink composition described in Claim 1 wherein the weight ratio of the compound expressed by the aforementioned general formula (1) to said hydrazide group compound (former/latter) is not less than 1:25 and not more than 5:1.

11. An ink composition described in Claim 1 further comprising a penetrating agent and/or a moisturizing agent.

12. A recording medium having an ink receiving layer formed on a substrate wherein said ink receiving layer comprises a compound expressed by the general formula (1) below and a hydrazide group compound.



(In formula (1), X is hydrogen, an oxy radical group, hydroxyl group, alkyl group, alkenyl group, alkylnyl group, aryl group, acyl group, sulfonyl group, sufinyl group, alkoxy group, aryloxy group, or acyloxy group; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are hydrogen or an alkyl group respectively; and Z is a non-metallic atom group necessary in order to complete a 5 to 7 member ring. Here, any two groups among R<sup>1</sup> to R<sup>4</sup> and Z may form a 5 to 7 member ring by mutual bonding.)

13. A recording medium described in Claim 12 wherein said compound expressed by general formula (1) comprises not less than 0.01 wt% and not more than 10 wt% of the total amount of the ink receiving layer.

14. A recording medium described in Claim 12 wherein said hydrazide group compound comprises not less than 0.01 wt% and not more than 10 wt% of the total amount of the ink receiving layer.

15. A recording medium described in Claim 12 wherein the weight ratio of the compound expressed by the general formula (1) to the hydrazide group compound (former/latter) is in the range of 1:25 to and 5:1 inclusive.

16. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein the ink composition described in Claim 1 is used as said ink composition.

17. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein the recording medium described in Claim 12 is used as said recording medium.

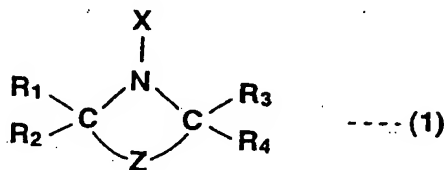
18. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein the ink composition described in Claim 1 is used as said ink composition, and the recording medium described in Claim 12 is used as said recording medium.

19. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein the ink composition described in Claim 1 is used as said ink composition, and a recording medium, in which an ink receiving layer is

provided on a substrate and said ink receiving layer comprises a class 3 amine group compound, is used as said recording medium.

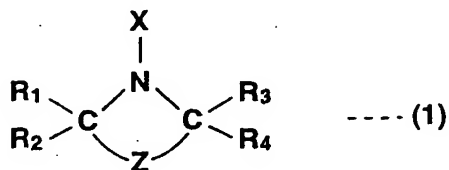
20. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein an ink composition, which comprises a colorant, water, and a hydrazide group compound, is used as said ink composition, and the recording medium described in Claim 12 is used as said recording medium.

21. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein an ink composition, which comprises a colorant, water, and a compound expressed by general formula (1) below, is used as said ink composition, and a recording medium, in which an ink receiving layer is provided on a substrate and said ink receiving layer comprises a class 3 amine group compound, is used as the aforementioned recording medium.



(In formula (1), X is hydrogen, an oxy radical group, hydroxyl group, alkyl group, alkenyl group, alkylnyl group, aryl group, acyl group, sulfonyl group, sufinyl group, alkoxy group, aryloxy group, or acyloxy group; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are hydrogen or an alkyl group respectively; and Z is a non-metallic atom group necessary in order to complete a 5 to 7 member ring. Here, any two groups among R<sup>1</sup> to R<sup>4</sup> and Z may form a 5 to 7 member ring by mutual bonding.)

22. An inkjet recording method that records on a recording medium by discharging droplets of ink composition and allowing said droplets to adhere to the recording medium, wherein an ink composition, which comprises a colorant, water, and a compound expressed by general formula (1) below, is used as the aforementioned ink composition, and the recording medium described in Claim 12 is used as said recording medium.



(In formula (1), X is hydrogen, an oxy radical group, hydroxyl group, alkyl group, alkenyl group, alkylanyl group, aryl group, acyl group, sulfonyl group, sufinyl group, alkoxy group, aryloxy group, or acyloxy group; R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are hydrogen or an alkyl group respectively; and Z is a non-metallic atom group necessary in order to complete a 5 to 7 member ring. Here, any two groups among R<sup>1</sup> to R<sup>4</sup> and Z may form a 5 to 7 member ring by mutual bonding.)

23. An inkjet recording method described in Claim 21 wherein the amount of the aforementioned compound expressed by general formula (1) contained is 0.05 wt% or more to 10 wt% or less of the aforementioned ink composition.

24. An inkjet recording method described in Claim 20 wherein the amount of the aforementioned hydrazide compound contained is not less than 0.01 wt% and not more than 10 wt% of said ink composition.

25. An inkjet recording method described in Claim 19 wherein the amount of the aforementioned hydrazide compound contained is not more than 0.01 wt% and not less than 10 wt% of said recording medium.

26. A recording recorded by the inkjet recording method described in Claim 16.